

Date revised: October 3, 2016

Date effective: October 10, 2016

The following sample exam for Aviation Maintenance Technician General (AMG) is suitable study material to satisfy the general portion of the Aviation Maintenance Technician test. These questions are a representation of questions that can be found on AMG test. The applicant must realize that these questions are to be used as a study guide, and are not necessarily actual test questions. The full AMG test contains 60 questions. The Application Identification, Information Verification and Authorization Requirements Matrix lists all FAA exams. It is available at [http://www.faa.gov/training\\_testing/testing/media/testing\\_matrix.pdf](http://www.faa.gov/training_testing/testing/media/testing_matrix.pdf).

The FAA testing system is supported by a series of supplement publications. These publications include the graphics, legends, and maps that are needed to successfully respond to certain test questions. FAA-CT-8080-4, Computer Testing Supplement for Aviation Mechanic General, Powerplant, and Airframe; and Parachute Rigger is available at [http://www.faa.gov/training\\_testing/testing/test\\_questions/media/FAA-CT-8080-4F.pdf](http://www.faa.gov/training_testing/testing/test_questions/media/FAA-CT-8080-4F.pdf).

Addendum A

[http://www.faa.gov/training\\_testing/testing/test\\_questions/media/FAA-CT-8080-4F Addendum A.pdf](http://www.faa.gov/training_testing/testing/test_questions/media/FAA-CT-8080-4F_Addendum_A.pdf)

**Sample AMG Exam:**

1 . AMG031

The opposition offered by a coil to the flow of alternating current is called (disregard resistance)

- A) impedance.
- B) reluctance.
- C) inductive reactance.

2 . AMG015

What is the operating resistance of a 30-watt light bulb designed for a 28-volt system?

- A) 1.07 ohms.
- B) 26 ohms.
- C) 0.93 ohm.

3 . AMG031

Which of the following are commonly used as rectifiers in electrical circuits?

- 1. Anodes.
- 2. Cathodes.
- 3. Diodes.

- A) 3, 1.
- B) 3, 2.
- C) 3.

4 . AMG042

Through which material will magnetic lines of force pass the most readily?

- A) Copper.
- B) Iron.
- C) Aluminum.

5 . AMG015

A 48-volt source is required to furnish 192 watts to a parallel circuit consisting of three resistors of equal value. What is the value of each resistor?

- A) 36 ohms.
- B) 4 ohms.
- C) 12 ohms.

6 . AMG015

Which statement is correct when made in reference to a parallel circuit?

- A) The current is equal in all portions of the circuit.
- B) The total current is equal to the sum of the currents through the individual branches of the circuit.
- C) The current in amperes can be found by dividing the EMF in volts by the sum of the resistors in ohms.

7 . AMG031

A lead acid battery with 12 cells connected in series (no load voltage = 2.1 volts per cell) furnishes 10 amperes to a load of 2 ohms resistance. The internal resistance of the battery in this instance is

- A) 0.52 ohm.
- B) 2.52 ohms.
- C) 5.0 ohms.

8 . AMG102

What is the opposition to the flow of AC produced by a magnetic field with generated back voltage (EMF) called?

- A) Inductive reactance.
- B) Capacitive reactance.
- C) Mutual inductance.

9 . AMG015

What is the likely result of servicing and charging nickel-cadmium and lead acid batteries together in the same service area?

- A) Lowered amp-hour capacities for both types of batteries.
- B) Reduced battery service life for both types of batteries.
- C) Contamination of both types of batteries.

10 . AMG031

Nickel-cadmium batteries which are stored for a long period of time will show a low liquid level because

- A) electrolyte evaporates through the vents.
- B) of current leakage from individual cells.
- C) electrolyte becomes absorbed into the plates.

11 . AMG031

Which of the following best describes the contributing factors to thermal runaway in a nickel-cadmium battery installed in an aircraft?

- A) High internal resistance intensified by high cell temperatures and a high current discharge/charge rate in a constant potential (voltage) charging system.
- B) Low internal resistance intensified by high cell temperatures and a high voltage discharge/charge rate in a constant current charging system.
- C) Low internal resistance intensified by high cell temperatures and a high current discharge/charge rate in a constant potential (voltage) charging system.

12 . AMG015

What will a voltmeter read if properly connected across a closed switch in a circuit with electrical power on?

- A) Voltage drop in the component(s) the switch is connected to.
- B) System voltage.
- C) Zero voltage.

13 . AMG031

What is the basic unit of electrical quantity?

- A) Electromotive Force.
- B) Ampere.
- C) Coulomb.

14 . AMG015

(Refer to General figure 19.) When the throttles are retarded with only the right gear down, the warning horn will not sound if an open occurs in wire

- A) No. 5.
- B) No. 13.
- C) No. 6.

15 . AMG015

When referring to an electrical circuit diagram, what point is considered to be at zero voltage?

- A) The circuit breaker.
- B) The ground reference.
- C) The switch.

16 . AMG031

What is defined as a group of bits representing a complete piece of information?

- A) Byte.
- B) Bit.
- C) Word.

17 . AMG031

Convert the binary number 1111 to decimal form.

- A) 14.
- B) 15.
- C) 16.

18 . AMG102

How would you convert farads to picofarads?

- A) Multiply farads by 10 to the power of 12.
- B) Multiply microfarads by 10 to the power of 12.
- C) Multiply picofarads by 10 to the power of 12.

19 . AMG102

In a parallel circuit with four 6-ohms resistors across a 24-volt battery, what is the total voltage across resistor-three (VR3) in the circuit?

- A) 6 volts.
- B) 18 volts.
- C) 24 volts.

20 . AMG102

Which of the following logic gates will provide an active high out only when all inputs are different?

- A) NAND.
- B) NOR.
- C) XOR.

21 . AMG102

In a parallel circuit with three 6-ohms resistors across a 12-volt battery, what is the total current (It) value in the circuit?

- A) 2 amps.
- B) 6 amps.
- C) 12 amps.

22 . AMG014

What type of drawing line consists of alternating long and short lines?

- A) Dimension.
- B) Center.
- C) Hidden.

23 . AMG001

1. According to 14 CFR Part 91, repairs to an aircraft skin should have a detailed dimensional sketch included in the permanent records.

2. On occasion, a mechanic may need to make a simple sketch of a proposed repair to an aircraft, a new design, or a modification.

Regarding the above statements,

- A) only No. 1 is true.
- B) only No. 2 is true.
- C) both No. 1 and No. 2 are true.

24 . AMG014

What numbering system is used to locate fuselage frames?

- A) Zone numbers.
- B) Station numbers.
- C) Tolerances.

25 . AMG013

In a sectional view drawing, what sections illustrate particular parts of an object?

- A) Removed.
- B) Revolved.
- C) Half.

26 . AMG014

What type of line is normally used in a mechanical drawing or blueprint to represent an edge or object not visible to the viewer?

- A) Medium weight dashed line.
- B) Medium solid line.
- C) Alternate short and long light dashes.

27 . AMG014

What is used to indicate that a surface must be machine finished?

- A) Tolerances.
- B) Leader lines.
- C) Finished marks.

28 . AMG016

(Refer to General figure 41.) Determine the fuel consumption with the engine operating at cruise, 2,350 RPM.

- A) 49.2 pounds per hour.
- B) 51.2 pounds per hour.
- C) 55.3 pounds per hour.

29 . AMG002

If an aircraft CG is found to be at 24 percent of MAC, that 24 percent is an expression of the

- A) distance from the TEMAC.
- B) distance from the LEMAC.
- C) average distance from the LEMAC to the wing center of lift.

30 . AMG002

What determines whether the value of a moment is preceded by a plus (+) or a minus (-) sign in aircraft weight and balance?

- A) The location of the weight in reference to the datum.
- B) The result of a weight being added or removed and its location relative to the datum.
- C) The location of the datum in reference to the aircraft CG.

31 . AMG002

Which statement is true regarding helicopter weight and balance?

- A) Regardless of internal or external loading, lateral axis cg control is ordinarily not a factor in maintaining helicopter weight and balance.
- B) The moment of tail-mounted components is subject to constant change.
- C) Weight and balance procedures for airplanes generally also apply to helicopters.

32 . AMG003

Maximum zero fuel weight is the

- A) dry weight plus the weight of full crew, passengers, and cargo.
- B) basic operating weight without crew, fuel, and cargo.
- C) maximum permissible weight of a loaded aircraft (passengers, crew, and cargo) without fuel.

33 . AMG002

When an aircraft is positioned for weighing on scales located under each landing gear wheel, which of the following may cause erroneous scale readings?

- A) Gear downlocks installed.
- B) Parking brakes set.
- C) Parking brakes not set.

34 . AMG002

Use of which of the following generally yields the highest degree of aircraft leveling accuracy?

- A) Electronic load cell(s).
- B) Spirit level(s).
- C) Plumb bob and chalk line.

35 . AMG017

Which statement(s) about Military Standard (MS) flareless fittings is/are correct?

1. During installation, MS flareless fittings are normally tightened by turning the nut a specified amount, rather than being torqued.
2. New MS flareless tubing/fittings should be assembled clean and dry without lubrication.
3. During installation, MS flareless fittings are normally tightened by applying a specified torque to the nut.

- A) 1.
- B) 1 and 2.
- C) 3.

36 . AMG037

When a Teflon hose has been in service for a time, what condition may have occurred and/or what precaution should be taken when it is temporarily removed from the aircraft?

- A) The hose interior must be kept wet with the fluid carried to prevent embrittlement/deterioration.
- B) The hose may become stiff and brittle if not flexed or moved regularly.
- C) The hose may have developed a set, or have been manufactured with a pre-set shape, and must be supported to maintain its shape.

37 . AMG036

If a flared tube coupling nut is overtightened, where is the tube most likely to be weakened/damaged?

- A) Along the entire length of the sleeve and tube interface.
- B) At the edge of the sleeve and straight portion of the tube.
- C) At the sleeve and flare junction.

38 . AMG036

The best tool to use when cutting aluminum tubing, or any tubing of moderately soft metal is a

- A) hand operated wheel-type tubing cutter.
- B) fine-tooth hacksaw.
- C) circular-saw equipped with an abrasive cutting wheel.

39 . AMG017

A particular component is attached to the aircraft structure by the use of an aircraft bolt and a castle tension nut combination. If the cotter pin hole does not align within the recommended torque range, the acceptable practice is to

- A) exceed the recommended torque range by no more than 10 percent.
- B) tighten below the torque range.
- C) change washers and try again.

40 . AMG017

Unless otherwise specified, torque values for tightening aircraft nuts and bolts relate to

- A) clean, dry threads.
- B) clean, lightly oiled threads.
- C) both dry and lightly oiled threads.

41 . AMG020

What is generally used in the construction of aircraft engine firewalls?

- A) Stainless steel.
- B) Chrome molybdenum alloy steel.
- C) Titanium nickel alloy.

42 . AMG066

A Technical Standard Order (T.S.O.) is issued by whom?

- A) The Aircraft industry.
- B) Part manufacturers.
- C) The Administrator.

43 . AMG045

When towing a large aircraft

- A) a person should be in the cockpit to watch for obstructions.
- B) persons should be stationed at the nose, each wingtip, and the empennage at all times.
- C) a person should be in the cockpit to operate the brakes.

44 . AMG045

A person should approach or leave a helicopter in the pilot's field of vision whenever the engine is running in order to avoid

- A) the tail rotor.
- B) the main rotor.
- C) blowing dust or debris caused by rotor downwash.

45 . AMG095

During starting of a turbine powerplant using a compressed air starter, a hung start occurred. Select the proper procedure.

- A) Advance power lever to increase RPM.
- B) Re-engage the starter.
- C) Shut the engine down.

46 . AMG012

Why is it important not to rotate the crankshaft after the corrosion preventive mixture has been put into the cylinders on engines prepared for storage?

- A) Engine damage can occur from hydraulic lock.
- B) Fuel may be drawn into one or more cylinders and dilute or wash off the corrosion preventive mixture.
- C) The seal of corrosion preventive mixture will be broken.

47 . AMG044

A rectangular shaped fuel tank measures 37-1/2 inches in length, 14 inches in width, and 8-1/4 inches in depth. How many cubic inches are within the tank?

- A) 59.75
- B) 433.125
- C) 4,331.25

48 . AMG044

The total piston displacement of a specific engine is

- A) dependent on the compression ratio.
- B) the volume displaced by all the pistons during one revolution of the crankshaft.
- C) the total volume of all the cylinders.

49 . AMG053

(Refer to the General figure 66.) Solve the equation.

- A) 35,998.
- B) 36,002.
- C) 62,208.



50 . AMG053

Find the cube of 64.

- A) 4.
- B) 192.
- C) 262,144.

51 . AMG053

What is the speed ratio of an input gear with 36 teeth meshed to a gear with 20 teeth?

- A) 9:5.
- B) 1:0.56.
- C) 1:1.8.

52 . AMG077

An aircraft was not approved for return to service after an annual inspection and the owner wanted to fly the aircraft to another maintenance base. Which statement is correct?

- A) The owner must obtain a special flight permit.
- B) The aircraft may be flown without restriction up to 10 hours to reach another maintenance base.
- C) The aircraft becomes a restricted category type until it is approved for return to service.

53 . AMG099

Which of the following is Newton's First Law of Motion, generally termed the Law of Inertia?

- A) To every action there is an equal and opposite reaction, if a force is applied to an object, the object will supply a resistive force exactly equal to and in the opposite direction of the force applied.
- B) Force is proportional to the product of mass and acceleration, when a force acts upon a body, the momentum of that body is changed.
- C) Objects at rest tend to remain at rest and objects in motion tend to remain in motion at the same speed and in the same direction, unless acted on by an external force.

54 . AMG025

When an airworthy (at the time of sale) aircraft is sold, the Airworthiness Certificate

- A) becomes invalid until the aircraft is reinspected and approved for return to service.
- B) is voided and a new certificate is issued upon application by the new owner.
- C) is transferred with the aircraft.

55 . AMG063

A person installing a product, part, or appliance on a type certificated product must make certain that the item's records document what type of statement?

- A) The product, part, or material meets FAA airworthiness standards.
- B) A product produced by an owner or operator does not need a statement.
- C) The product or material was not produced under an FAA production approval.

56 . AMG116

The positive aspects of human factor issues is referred to as?

- A) Magnificent Seven.
- B) Dirty Dozen.
- C) MEDA.

57 . AMG032

All of the following are consequences of human error, except

- A) mental stressor.
- B) catastrophic.
- C) personal injury.

58 . AMG107

According to Dr. James Reason there are two types of human failure which can occur, they are

- A) active and latent.
- B) mental and physical.
- C) proper and improper.

59 . AMG107

The "SHEL" model is another human factors tool, the goal is to determine not only what the problem is, but also

- A) where and why it exists.
- B) how we prevent the problem.
- C) how many factors contribute to the error.

60 . AMG107

When we think of aviation safety in a contemporary way, human error is

- A) the starting point.
- B) the ending point.
- C) the intervention point.